STATE OF NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WASTE MANAGEMENT

PERMIT TO OPERATE A SEPTAGE LAND APPLICATION SITE

Page's Septic Tank Cleaning Robert Page 146 Pine Ridge Road Mocksville, NC 27028

is hereby issued a permit to operate Septage Land Application Site with permit #SLAS-30-07 located on Hwy 64 East in Davie County in approximate position 35.87764° N latitude and -80.49136° W longitude. The site is to be operated in accordance with 15A NCAC 13B .0800 Septage Management, the information stated in the approved application, and the conditions of this permit. The unauthorized disposal of any liquid or solid wastes other than those specified in the conditions of this permit will be considered a violation of the conditions of this permit. Failure to comply with the conditions of this permit may result in permit suspension, permit revocation, action for injunctive relief, administrative penalties, or other remedies as provided in G.S. 130A, Article 1., Part 2.

This permit shall be reviewed annually to determine if soil test results and management activities are in compliance with the Septage Management Rules and the conditions of this permit. Modifications, where necessary, shall be made in accordance with rules in affect at the time of review.

Date Issued 10/4/11

Solid Waste Section

Operator: Robert Page

SLAS# 30-07 County: Davie Page 2 of 3

Permit Conditions:

1. This permit shall become voidable if the soils fail to adequately assimilate the septage and shall be rescinded unless the site is maintained and operated in a manner which will protect the assigned water quality standards of the surface waters and ground waters.

- 2. This site shall be operated and maintained in accordance with the nutrient management plan submitted by Robert Page and approved by the Division. The 10.8 acres are divided into field B (5.7 acres) and field C (5.1 acres). The 30 day waiting period between the last application of septage and the harvest or grazing of the crop shall be maintained. All discharges shall be at locations on the site consistent with the crop rotation in the approved plan.
- 3. This site shall be operated and maintained in accordance with the erosion and runoff control plan submitted by Robert Page and approved by the Division. Any site improvements noted in the plan must be installed within 30 days of plan approval. The site shall be operated and erosion and runoff control measures maintained in such a manner as to prevent migration of wastes off of the designated waste receiving site. The installation of groundwater monitoring wells shall be required as deemed necessary by the Division.
- 4. The issuance of this permit does not preclude the Permittee from complying with any and all statutes, rules, regulations, or ordinances which may be imposed by other government agencies (local, state and federal) which have jurisdiction. It is the responsibility of the permittee to be in compliance with the requirements of 40 CFR 503.
- 5. This permit may be modified or reissued to incorporate any conditions, limitations and monitoring requirements of the Division of Waste Management deems necessary to adequately protect the environment and public health.
- 6. This site is only permitted for the land application of domestic septage (including portable toilet waste) and grease septage. Domestic septage pH shall be raised to 12 or higher by alkali addition and, without the addition of additional alkali, shall remain at 12 or higher for 30 minutes prior to land application. Grease septage or grease septage mixed with domestic septage shall be raised to pH 12 or higher by alkali addition and, without the addition of additional alkali, shall remain at 12 or higher for 2 hours prior to land application.
- 7. This site contains approximately 10.8 acres that are available for septage land application. The maximum annual application rate shall be 50,000 gallons per acre per year, for a total maximum annual application rate of 540,000 gallons. This application rate assumes equal septage distribution, on an annual basis, over the permitted area. Monthly septage applications shall not exceed the monthly relative application rates given in the approved nutrient management plan for the site.
- 8. An approved above ground septage detention system with a minimum design capacity of 10,385 gallons shall be available prior to operation of this site unless an approved wastewater treatment plant is available for use during periods of adverse weather. The storage capacity may be adjusted if it is demonstrated during the operation of the site that this volume of storage is inappropriate.

Operator: Robert Page

SLAS: 30-07 County: Davie Page 3 of 3

9. Only the area designated on the attached site map(s) shall be utilized for septage disposal. Each load of septage discharged at the site shall be distributed from a moving vehicle in such a manner as to have no standing water when the discharge is complete. Septage shall not be applied during periods of high soil moisture.

- 10. Septage shall not be applied during any precipitation event, or if there is standing water on the soil surface, if the soil surface is frozen, or if the soil surface is snow covered. The Permittee shall consider pending weather conditions when making the decision to land apply in order to prevent any discharge of septage outside of the permitted boundary.
- 11. Septage applications that will result in ruts greater than three inches in the soil surface are prohibited.
- 12. Any discharge of septage outside of the permitted boundaries via runoff, aerial drift, etc. is prohibited.
- 13. This permit shall become void unless the land application activities are carried out in accordance with the conditions of this permit and in the manner approved by this Division. No one other than the permittee shall discharge septage at this site without prior appropriate notification and written approval of the Division of Waste Management.
- 14. Prior to any transfer of this land, a notice shall be given to the new owner that gives full details of the materials applied or incorporated at this site. The Division shall be notified prior to site closure.
- 15. This permit shall expire on September 24, 2016. Modifications, when necessary, shall be made in accordance with the rules in effect at the time of renewal. An application for permit renewal shall be submitted at least ninety (90) days prior to the permit renewal date. A septage application log for the period of time this permit was valid shall be submitted along with an application for permit renewal or modification. The information required in the log is described in Rule 15A NCAC 13B .0838(e)(1) of the NC Septage Management Rules and 40 CFR Part 503.17(b) of the Federal Register. This permit is non-transferable.
- 16. Records shall be kept in accordance with 40 CFR 503.17(b). These records shall be made available to a representative of the Division of Waste Management upon request.
- 17. Any duly authorized officer, employee, or representative of the Division of Waste Management may, upon presentation of credentials, enter and inspect any property, premises, or place on or related to the disposal site and facility at any reasonable time for the purpose of determining compliance with this permit; may inspect or copy any records that must be kept under the conditions of this permit; or may obtain samples of groundwater, surface water, or leachate.
- 18. Field separations in the nutrient management plan and all pertinent setbacks shall be clearly located on the site. Boundaries of the permitted septage land application fields shall be clearly marked on the ground.
- 19. The areas which can be used for land application of septage shall be maintained at least 500 feet from any existing wells, residences, places of business, or places of public assembly. Septage shall not be disposed of within 50 feet of any property line, within 100 feet of any ditch or within 200 feet of any surface water.



North Carolina Department of Environment and Natural Resources

Division of Waste Management Dexter R. Matthews Director

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Folly & Ann Conscisor, landownges

Davis County Israeli Dapadinani

October 4, 2011

Dee Freeman Secretary

Mr. Robert Page Page's Septic Tank Cleaning 146 Pine Ridge Road Mocksville, NC 27028 Januar Hoe Joneya Banks.

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SLAS permit renewal RE:

Page's Septic Tank Cleaning

SLAS-30-07

Hwy 64 East in Davie County

Dear Mr. Page:

Beverly Eaves Perdue

Governor

The NC Division of Waste Management has reviewed your application for a septage land application site in Davie County. Your application has been approved and your permit (#SLAS-30-07) is enclosed. If you have any questions about your permit. we'll need the number in order to answer your questions.

Please read all of your permit conditions carefully. Your nutrient management and soil erosion and runoff control plans have been included in your permit's conditions. In particular, review Permit Condition 12, which states you need to submit septage application logs for your site in order to renew your permit. These logs need to cover the entire time your current permit is valid. For details on the information you should include, consult the NC Septage Management Rule 15A NCAC 13B .0838(e)(1) and the Federal register's 40CFR Part 503.17 (b). This permit condition also states that this permit is valid until September 24, 2016. If you have any questions, please ask for assistance as rule violations could expose you to administrative penalties.

Please note that to land apply industrial or commercial septage at a permitted septage disposal site you must have prior approval from the NC Division of Waste Management. The waste must be sampled prior to being removed from the system. Generally, the Division will request that you have a waste analysis run on septage from each commercial or industrial septage generator before that type of septage is approved for land application.

Use of a land application site or septage detention or treatment facility that is not permitted may result in administrative penalties up to \$15,000 per violation in accordance with NC General Statute 130A-22.

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Please call me at (910) 433-3352 or Mike Scott at (919) 508-8497 if you have any questions.

Sincerely,

Connie Wylie, Soil Scientist

Composting & Land Application Branch

Enclosures

cc: Toby & Ann Cornatzer, landowners
Davie County Health Department

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APPLICATION FOR A PERMIT TO OPERATE A SEPTAGE LAND APPLICATION SITE

North Carolina Department of Environment and Natural Resources Division of Waste Management – Solid Waste Section 401 Oberlin Rd., Ste. 150, Raleigh, N.C. 27605

l.	Site and Operator I	^ / · · · · ·
	1. Applicant	Kobert Page
	Address	146 Pine Ridge RL
	Phone	mackenille NC 27028
	riione	(336) 284-4362
	2. Contact person Title or position Address	for site operation (if different from applicant): Phone
		- 110NE
		The state of the s
	3. Landowner	Toby A Cornatzer Farm
	Address	2482 US 64- E
(eq. per		Mackswille NC 27028
		CANNESTED SECTOR DESCRIPTION DATE LA BUSINES GUISTONS DE PROPERTIES DE LA BUSINES DE L
4	4. Site Location:	County Davie State Road Number Hung 4- East
4-40	Directions to site:	
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a Say	Appropriate Control of the Control o	(1 yenold)
5	 Indicate whether it 	request is: new renewal modification
	For a permit renev Existing site perm	wal or modification, provide the following information: it number: 30-07 permit expiration date: 9/34/11
6 cre	. Number of acres r s.	meeting the requirements of the N.C. Septage Management Rules: 10.5
7.	Substances other (a) None dates of discharge	than septage or grease trap pumpings previously disposed of on the site: , or (b) Attach a list indicating other substances, the amounts discharged, and the
8.	corporate landow	arized landowner authorization to operate a septage disposal site signed by the ermit applicant does not own the property). If a corporation owns the land use a vner authorization form. If limited liability company owns the land, use a empany landowner authorization form.
9.	Attach site evaluation the Division prepare	ion report, including aerial photograph and soil analysis with metals results, unless ed the report.
10.	Attach a vicinity m	ap (county road map showing site location).
.	(or)	DECEIVIED

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5.	5. Proposed treatment method of each type of septage to be land applied (use additional paper to explain if necessary): Septage 30 min Limes PH 12) Some Portable Toilet ausit mix with septage (2 ldrs Lime to 12 pH) mix with Septire to hard disposal HI was to shall be at pH 12 in hiller to land (0)					
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	Demonstration from the appropriate state or federal government agency that the land application site complies with the Endangered Species Law ** or if any part of the site specified is not agricultural land (use additional paper to explain if necessary):					
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II. Site Management Information:

Landowner's Authorization to Operate a Septage Land Application Site

North Carolina Department of Environment and Natural Resources Division of Waste Management - Solid Waste Section 401 Oberlin Rd, Ste. 150, Raleigh, N.C. 27605

I, Toby A. CorneTzeR (name of site owner) hereby certify that I am the owner of
58.161 acres of land located us blue 64-8
Deed Book 701 Page 247
and identified by Book + Page 00701247 (book and page of recorded deed o
tax map parcel) and that I agree to allow Robert Page (name of site operator)
to use said land for septage land application for a period of (length of time),
beginning Sept- 24-11 (month, day and year) and that I have read the North
Carolina Septage Management Rules *, and I understand and agree to maintain the restrictions on land
use after septage land application ends **. I further understand that no septage may be land applied until
the Division of Waste Management has issued a permit for a septage land application site. The above
described property is owned solely by me or jointly with
(names of all co-owners, or state none).
Signature of landowner John a Cornotan Date 8/22/11
Signature of landowner Am & Cornaty Date 8-22-11
Sworn to and subscribed before me this 22 nd/ day of August , 2011
Karen C. Relection (Notary Public)
My Commission expires: 11-30-13 (OFFICIAL SEAL) Karen C. Robertson
* 15A N.C. Admin. Code 13B Section ,0800 Notary Public Davie County, NC
** As required by Rule .0826 My Commission Expires 11-30-13

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NUTRIENT MANAGEMENT PLAN FOR SEPTAGE LAND APPLICATION

NCDENR, Division of Waste Management, Solid Waste Section

Operator Permit No: NCS00474

For: Robert Page
Page's Septic Tank Cleaning
146 Pine Ridge Road
Mocksville, NC 27028

Home: 336-284-4362 Cell: 336-940-7910

Land Application Site Owner & Home Address: Toby A. Cornatzer Farm 2482 US Hwy. 64 E. Mocksville, NC 27028

> Parcel Number: J600000073 Davie County Tax Department

March 4, 2010



DIVISION OF WASTE MANAGEMENT FAYETTEVILLE REGIONAL OFFICE

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- III. NITROGEN NEEDS
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- V. APPLICATION MEHTOD
- VI. ADDITIONAL FERTILITY REQUIREMENTS
- VII. CROP REMOVAL AND RESTRICTIONS
- VIII. RUNOFF AND SOIL EROSION
- IX. PLAN PREPARATION ASSISTANCE CONTACTS
- X. ATTACHEMENTS
 - A. TAX PARCEL REPORT
 - B. SOILS MAP
 - C. SOIL TEST REPORT





I. General Information

A. A soil test will be taken every year and the site fertilized with commercial fertilizer as needed to maintain adequate plant growth and production and to maintain a sufficient and sustainable plant density. Phosphorous, Potassium and micronutrient levels shall be maintained such that NCDA&CS Soil Test Index Values are near the medium range or above. The Index Values used by NCDA&CS are 0-24 low, 25-50 medium, > 50 high, and >100 very high. Commercial fertilization rate combined with septage rate shall not exceed the RYE rates.

NCDA&CS Soil Test Report #23520, dated 2/15/2010 is attached. Mr. Patrick Mitchell, Soil Scientist, collected the sample on about December 20, 2009.

Comments on Soil Test Report #23520:

Potassium indexes for the site are either in the high or very high range and therefore additional Potassium from commercial fertilizer is not recommended unless the values decrease significantly or plant tissue analysis indicates a Potassium deficiency in the crop.

Phosphorus indexes for the site are in middle of the low range. It is not uncommon to adequately grow fescue at the reported Phosphorus levels. Septage applications will likely be able to provide most if not all the nutrients needed to maintain a healthy and vibrant stand of fescue and/or orchardgrass on the application site. If a higher level of production is desired the site could benefit from a spring and/or fall application of triple super phosphate, 18-46-0, or similar material to provide additional Nitrogen and Phosphorus. The micronutrient levels for Mn, Zn, Cu and S are all sufficient.

Soil pH levels are below the desired level for fescue and/or orchardgrass production. However, since the septage being applied is treated with lime, over time the pH values are expected to increase. If grass growth is less than desired and it is determined that soil pH is a factor, one-half ton per acre of lime should be applied then followed up with a soil test six to twelve months later. The soil test report values will then be used for further refine recommendations. Due to the addition of lime in the septage material, care must be taken not to over-lime the site. The pH value should not exceed 6.5.

B. Field B 6.1 acres permitted Field C 5.0 acres permitted

Total permitted acres = 11.1 acres Total acres in tract = ~ 57

Properly managed fescue on Enon soil can produce 4.3 tons of forage per acre. The suggested nitrogen application rate is 44 lbs.N/ton. 4.3 tons/Ac X 44 lbs.N/ton = 189 lbs. N/Ac



- C. Field B, according to the USDA Soil Survey of Davie County, North Carolina, is mostly mapped as Gaston clay loam, 2-8 % slope, eroded (GnB2). Field C is mapped Gaston clay loam, 2-8 % slope, eroded (GnB2), Mocksville sandy loam, 15-45 % slope (MsD), and Enon fine sandy loam, 2-8 % slope (EnB).
- D. Septage will not be applied to this site when the soil is frozen, snow covered or is sufficiently wet that a loaded septage vehicle will depress (leave ruts) the soil more than 3 inches.
- E. An alternative to land application when soil conditions are unacceptable is the use of the Mocksville Waste Water Treatment Plant.
- F. Total nitrogen loading rates will be based on no more than 100% of accepted normal agronomic rates for the crops grown, harvested and removed from the field. No more than 75% of accepted normal agronomic rates will be used when the crop is grazed.
- G. Septage will be applied only in the designated and permitted areas.
- H. No other bio-solid waste materials will be applied to this site without permission from NCDEHR, Division of Waste Management, Solid Waste Section.
- I. Minimum Plant Available Nitrogen (PAN) recommendations will be used to determine minimum plant growth and sustainability needs. Commercial fertilizer can be used to supplement plant nutrient needs that septage applications do not provide.

II. Crops To Be Grown and Practices To Be Implemented

All fields will be expected to maintain an adequate stand of cool season grass. Tall fescue and orchardgrass will be grown separately or in a mixed stand. The nutrient needs, growth and harvest stage of tall fescue and orchardgrass are similar. An adequate stand of grass, i.e. plant density, will be evaluated based on the presences of either or both species. Other incidental plant species that are beneficial livestock feed will be permitted as long as they are not the dominant species. An example would be various types of clover.

Guidelines for Reseeding and/or Interseeding: Reseeding and/or interseeding will be conducted on an as needed basis when stand density falls below 80%. Reseeding or Interseeding will be initiated to improve the stand. Interseeding rates for tall fescue and/or orchardgrass shall be 8-15 pounds per acre drilled and 12-20 pounds per acre broadcast. If complete stand reestablishment occurs, i.e. total reseeding, it is recommended that seeding rates be increased 50-100%. Fall seeding is preferred over spring. Fall seeding will occur between August 25 and October 25, weather permitting. Spring seeding shall occur between February 15 and March 31, weather permitting. Interseeded/reseeded fields may resume septage applications after the new growth has begun and a stand height of at least four inches is present. Septage applications on newly established grass shall be limited to no more than one 10,000 gallons per month until the grass is well established and



approaching its first harvest or grazing cycle.

Field B: Currently this field has a good stand of tall fescue and/or orchardgrass. Additional reseeding/interseeding will be conducted on an as needed basis. With decent weather and proper management the field is not expected to need reseeding within the next 5 years.

Field C:

Reseeding/interseeding is not anticipated but will be conducted on an as needed basis. With decent weather and proper management the field is not expected to need reseeding within the next 5 years.

III. Nitrogen Needs

Tall fescue, orchardgrass and mixed stands: The agronomic range for nitrogen is 120 – 200 pounds per acre. This is per N.C. Cooperative Extension, N.C. State University and the N.C. Department of Agriculture and Consumer Services, Agronomic Division. The recommended rates are reduced 25% if grazing, rather than haying to be 75 – 150 pounds of N per acre.

These rates are considered adequate and appropriate to achieve medium-high to high production levels. If lower production levels are desired lower amounts of nitrogen can be applied provided stand health and sustainability are not compromised. Tall fescue and orchardgrass hay fields should receive a minimum of 40 - 50 pounds of N per acre per year from all sources.

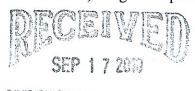
Commercial nitrogen fertilizer applications for cool season grasses will only be allowed during the late Winter/early Spring (February, March and April) and during the late Summer/Fall (late August, September, October).

The Nitrogen content of septage is based on NCDENR, Division of Waste Management, Solid Waste Section standards of two and six tenths (2.6) pound of Plant Available Nitrogen per 1,000 gallons of septage.

IV. Monthly and Annual Septage Application Quantity Limitations

The following table is provide to allow year round application of septage to fescue and/or orchardgrass. The range of application amounts coincides with the growth rate of cool season grasses such as fescue and orchardgrass. While Nitrogen application is not needed or recommended during certain times in the year, the amount of Nitrogen from the maximum allowed amount of septage applied will not have a negative impact on the forage being grown or present water quality concerns.

Low Application Months: no more than 5,000 gallons per acre total can be applied. Medium Application Months: no more than 10,000 gallons per acre total can be applied. High Application Months: no more than 15,000 gallons per acre total can be applied.



DIVISION OF WASTE MANAGEMENT FAYETTEVILLE REGIONAL OFFICE



<u>Month</u>	Rating	Maximum Application
January	Low	5,000 gallons/acre
February	Medium	10,000 gallons/acre
March	High	15,000 gallons/acre
April	High	15,000 gallons/acre
May	Medium	10,000 gallons/acre
June	Low	5,000 gallons/acre
July	Low	5,000 gallons/acre
August	Medium	10,000 gallons/acre
September	Medium	10,000 gallons/acre
October	Medium	10,000 gallons/acre
November	Low	5,000 gallons/acre
December	Low	5,000 gallons/acre



NOTE: Total, annual, calendar year, applications of septage shall never be allowed to exceed 50,000 gallons per acre.

V. Application Method

Septage will be evenly spread over the application site via a septage truck (pumper/hauler) equipped with a gate value or similar discharge outlet while traveling at a minimum of 3 miles per hour ground speed in such a manner as to have no standing liquid or soil disturbance resulting from the waste flow after the discharge is complete.

VI. Additional Fertility Requirements

The majority of the permitted area consists of soil types listed in the Davie County Soil Survey reports as Prime Farmland, specifically EnB, GnB2, and MsB. All permitted areas are capable of producing tall fescue and orchardgrass yields that would respond to the maximum recommended rates of 200 pounds of PAN per acre per year. The Davie County Soil Survey rates the EnB at 5.1 tons of grass hay production per year, GnB2 at 5.5 tons, GnC2 at 5.0 tons, and MsC at 3.3 tons. To maintain a productive and sustainable stand of tall fescue and/or orchardgrass a minimum of 40-50 pounds of PAN shall be provided to the crop per year.

Therefore, additional nitrogen from non-biosolids will likely be needed. Soil tests will be used to determine lime and other nutrient needs. Needed lime and other nutrient needs will be supplied from supplemental non-biosolid sources in order to maintain plant health and sustainability.

VII. Crop Removal and Restrictions

- A. A 30-day minimum waiting period will be observed after septage applications before grazing and/or forage harvesting occurs.
- B. Septage application shall cease once the crop has reach 12 to 15 inches in height. Once a 30-day minimum period since application of septage the crop will be harvested or grazed.



A minimum of two harvests or grazing cycles will is required per year. This will typically consists of a spring and fall harvest.

- C. The operator will maintain a rotational septage application system to insure that proper and timely agronomic practices are followed and septage application can occur year round.
- D. Fields B and C will be rotationally grazed and/or harvested for hay using mechanical equipment. In the spring it would be normal to harvest grass growth in excess of grazing needs. The rotational grazing plan for fields B & C will be a basic plan of removing all animals and restricts any grazing or mechanical harvesting for a minimum of 30 days after septage has been applied. Grazing animals can be moved to on field or the other as well as additional fields that can be used for grazing while the 30 day with holding period is in place. Giving a set rotation schedule is not practical as weather and animal numbers will determine forage availability and consumption. There is enough available grass land to ensure animals can be rotated so septage fields have the 30 day with holding period and livestock do not over graze any field. The livestock agent will provide assistance with the rotational grazing schedule as needed.

VIII. Runoff and Soil Erosion

Following established setbacks, including a minimum of 200' from surface waters, and maintaining buffer strips should prevent runoff of septage. Adequately maintained grass stands or forested areas of at least 50' around fields B & C associated with 2-8% slopes of fields B & C, will minimize soil erosion concerns and buffer strips will provide additional assurance.

IX. Nutrient Management Plan preparation assistance provided at no cost to applicant by:

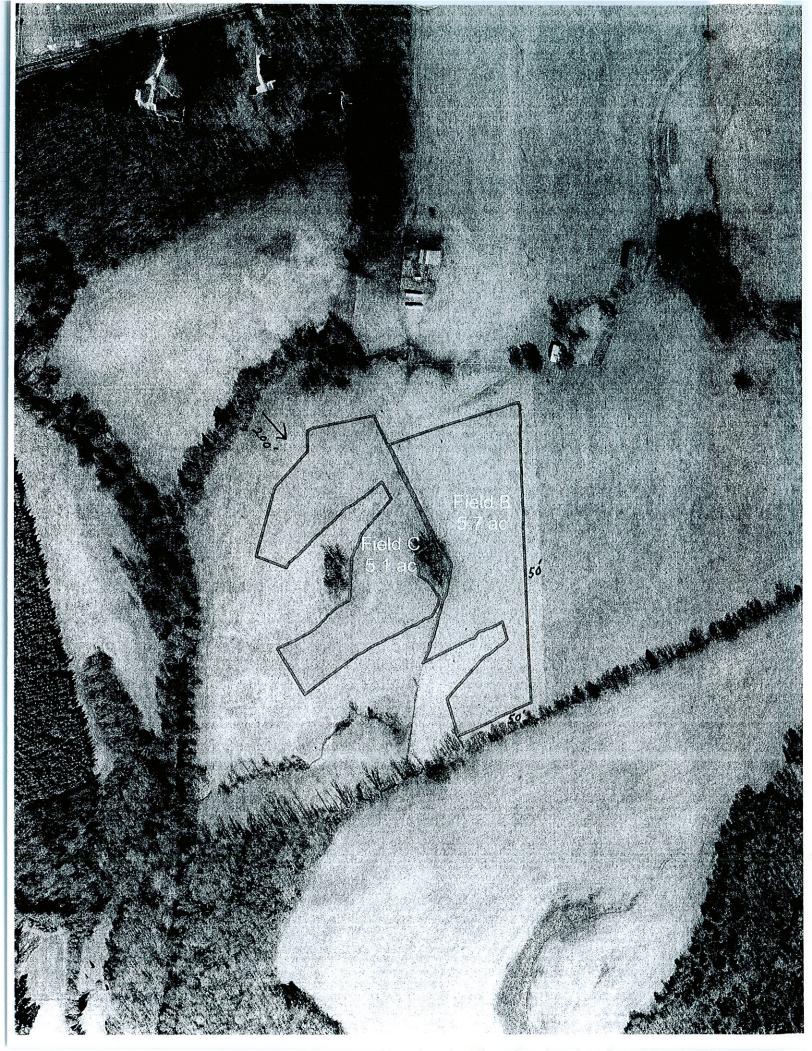
Gregory M. Hoover, County Extension Director NC Cooperative Extension – Davie County Center 180 S. Main Street, Suite 210 Mocksville, NC 27028 336-753-6100 FAX 336-751-1184 greg hoover@ncsu.edu

Modifications to this plan or assistance with future updates should be directed to:

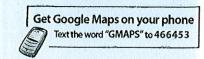
Phillip R. Rucker, Jr., Extension Agent – Livestock NC Cooperative Extension - Davie County Center 180 S. Main Street, Suite 210 Mocksville, NC 27028 336-753-6100 FAX 336-751-1184 phil rucker@ncsu.edu

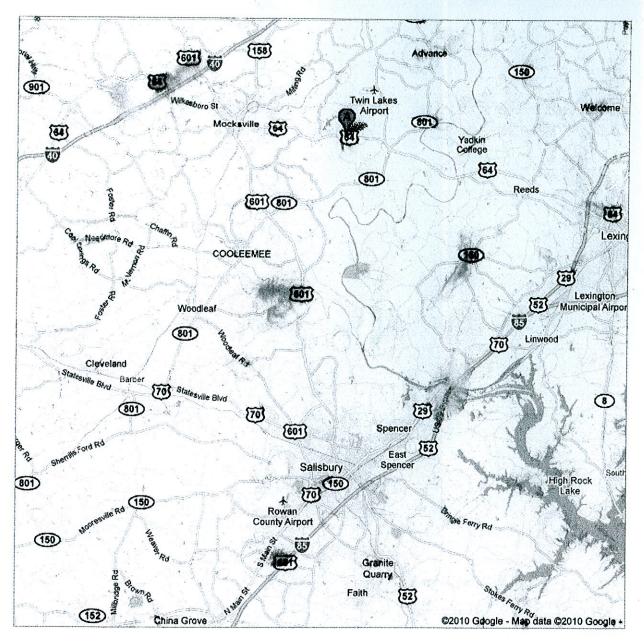
This Plan is Submitted by: Robert Page
Robert Page
Robert Page
1/03/11

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